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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,673	02/13/2001	Juan C. Cardona	T0428/7119 TJO/RHW	9037

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EXAMINER
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KUHNS, ALLAN R

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/782,673

**Applicant(s)**

CARDONA ET AL.

**Examiner**

Allan Kuhns

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-77 is/are pending in the application.
- 4a) Of the above claim(s) 63-77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/10&amp;11/12/03</u> . | 6) <input type="checkbox"/> Other: _____  |

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1.Applicant's election with traverse of Group I in Paper No. 030904 is acknowledged. The traversal is on the ground(s) that a single search and examination of all claims would not place an undue burden on the examiner. This is not found persuasive because an undue burden would be placed on the examiner since one group requires a search for apparatus structure while the other group requires a search for manipulative steps.

The requirement is still deemed proper and is therefore made FINAL.

2.Claims 63-77 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 030904.

3.The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-39, 42-44, 46-53 and 55-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Hunerberg (4,211,523). Hunerberg discloses the claimed system for injecting a blowing agent into polymeric material within a barrel of a polymer processing apparatus including a conduit having an inlet connectable to a source of blowing agent and an outlet connectable to a port in the barrel to provide a pathway through which blowing agent flows from the source to the polymeric material within the barrel, and a flow controlling system including a bypassing passageway fluidly

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connected to the conduit at a position between the inlet and the outlet, the flow controlling device designed to selectively direct blowing agent flowing from the source to the polymeric material within the barrel, or through the bypassing passageway.

Hunerberg also teaches the length and volume limitations of claims 19-21, 29-33, 46, 49-53 and 56 because it is stated at column 4, lines 15-16 that the inlet port 26 "receives" valve 28. Hunerberg teaches the blowing agent of claims 38 and 42.

Hunerberg also teaches the inclusion of a bypass system and back pressure regulator, as in claims 5-13, 22-24, 28 and the valve and metering means of claims 14-19, 22-27 and 35-36. Hunerberg teaches the continuous operation of claim 34, discontinuous operation, as in claim 43, and injection molding, as in claim 44, and the valve systems of claims 47-48 and 55.

4.The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5.Claims 40-41 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunerberg. Hunerberg teaches the basic claimed system structure. The examiner takes Official Notice that the use of carbon dioxide and fluids under supercritical conditions are known as blowing agents for forming foamed bodies, and that systems for extruding parisons for blow molding are known and are used in order to produce shell-like articles.

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6. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunerberg as applied to claims 40-41 and 45 above, and further in view of Xu (6,322,347). Xu teaches the interchangeable nature of an accumulator system (as used by Hunerberg) and a reciprocating screw for injecting a mass into an injection mold. It would have been obvious to one of ordinary skill in the art to substitute the use of a reciprocating screw for an accumulator system with a plunger into the system of Hunerberg because Xu teaches that each would be effective. Hunerberg teaches using a bypass mode during injection, as in claim 3.

7. Claims 54 and 57-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunerberg in view of Anderson et al. (6,376,059). Hunerberg discloses the basic claimed blowing agent injection assembly. Also in such a blowing agent injection assembly, Anderson et al. teach, at column 8, lines 30-46, the aspect of using a multi-orifice outlet. It would have been obvious to one of ordinary skill in the art to incorporate such an outlet in the system of Hunerberg in order to better distribute the blowing agent within the barrel. Anderson et al. teach at least 10 orifices, as in claim 59, at column 8, line 41.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Kuhns whose telephone number is (571) 272-1202. The examiner can normally be reached on Monday to Thursday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni, can be reached on (571) 272-1196. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Allen R. Kuhns*  
ALLAN R. KUHNS  
PRIMARY EXAMINER AU 1732  
5-20-04